

REMARKS

Claims 1-30, 32 and 33 are pending in this application. By this Amendment, claims 1, 2, 4, 9-13, 19-21, 24-30, 32 and 33 are amended and claim 31 are canceled without prejudice to, or disclaimer of, the subject matter recited therein. Support for the amendments to claim 1 can be found at least in Fig. 4 and in the specification, for example, at paragraphs [0062] and [0063]. Support for the amendments to claim 9 can be found in the specification, for example, at paragraphs [0039] and [0075]. Support for the amendments to claims 10, 29 and 33 can be found in the specification, for example, at paragraph [0082]. Support for the amendments to claim 30 can be found at least in original claim 31, in Fig. 4 and in the specification, for example, at paragraphs [0062] and [0063]. Claims 1, 2, 4, 9-13, 19-21, 24-30, 32 and 33 are further amended for form and/or for dependency. No new matter is added.

Claims 10, 29 and 33 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. By this Amendment, claims 10, 29 and 33 are amended responsive to the rejection. Applicants thus respectfully request withdrawal of the rejection.

Claims 10, 29 and 33 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. The rejection is respectfully traversed.

By this Amendment, claims 10, 29 and 33 are amended responsive to the rejection, to recite that the on-off states of the first and second resolution setting signals are changed at a predetermined moment of detection. Support for the features recited in claims 10, 29 and 33 can be found at least in Fig. 7B and the corresponding disclosure in the specification.

The claimed "first portion" may correspond to the embodiment illustrated in Fig. 7A, i.e., the moment when the strobe signal STB fall, at which point the on-off states of the start signal SP and the clock pulse signal CLK are detected (see paragraph [0082] and Fig. 7A of the specification). Further, the claimed "second portion" may correspond to the embodiments illustrated in Figs. 7B, 9 and 10, for example. In the embodiment in Fig. 7B, for example, the

strobe signal STB may have a predetermined fall timing. The fall timings of the start SP and clock CLK pulse signals with respect to the predetermined fall timing of the strobe signal STB may be changed so that the on-off states of the signals SP, CLK at the predetermined fall timing of the strobe signal STB are changed (see paragraphs [0082] and [0083] of Applicants' specification)

Therefore, for at least these reasons, claims 10, 29 and 33 comply with the written description requirement of 35 U.S.C. §112, first paragraph. Applicants respectfully request withdrawal of the rejection.

Claim 29 is rejected under 35 U.S.C. §112, second paragraph. By this Amendment, claim 29 is amended responsive to the rejection. Applicants thus respectfully request withdrawal of the rejection.

Claims 1-7, 9, 12-20, 22, 24-27, 30 and 31 are rejected under 35 U.S.C. §102(e) over Saika (U.S. Patent Application Publication No. 2002/0135827); claims 8, 23 and 32 are rejected under 35 U.S.C. §103(a) over Saika in view of Abe (JP 2002-185698 A); claim 21 is rejected under 35 U.S.C. §103(a) over Saika in view of Abe and further in view of Kozuka (U.S. Patent No. 6,473,538); claim 28 is rejected under 35 U.S.C. §103(a) over Saika in view of Abe and further in view of Kozuka and Moss et al. ("Logic Elements," *The Electrical Engineering Handbook*. Boca Raton: CRC Press LLC, 2000); and claims 9-11 and 33 are rejected under 35 U.S.C. §103(a) over Abe in view of Saika. The rejection of canceled claim 31 is moot and the rejections of the remaining claims are respectfully traversed.

None of the above-applied references teaches or renders obvious every claimed feature of independent claims 1 and 30. None of the above-applied references teaches or renders obvious "a first input terminal through which a resolution setting timing signal is received from an external device outside of the image sensor; a second input terminal through which a second resolution setting signal is received from said external device; [and] a

resolution setting portion that receives said resolution setting timing signal," as recited in independent claim 1; and "generating a resolution setting timing signal, a first resolution setting signal and a second resolution setting signal, which are received by the image sensor through first, second and third input terminals, respectively, from an external device outside of the image sensor," as recited in independent claim 30 (emphasis added).

The Office Action asserts that the clock pulse signal CLK of Saika corresponds to the claimed resolution setting timing signal of independent claims 1 and 30, and that the two portions T1, T2 of the clock pulse signal CLK of Saika correspond to the claimed first and second resolution setting signals of independent claims 1 and 30 (see Office Action, page 4). However, the alleged first and second resolution setting signals T1, T2 of Saika are actually pulse widths of the same clock pulse signal CLK (see Fig. 4 of Saika). Further, Saika teaches that the clock pulse signal CLK is inputted through only one input terminal (see paragraphs [0027], [0032] and [0033] of Saika). In other words, Saika does not teach the clock pulse signal being inputted through a first input terminal, a second input terminal and a resolution setting portion, as recited in independent claim 1; or first, second and third input terminals, as recited in independent claim 30.

Further, no other signal of Saika could reasonably correspond to the claimed resolution setting signal(s) of independent claims 1 and 30. Figs. 2 and 4, and paragraphs [0027], [0032] and [0033] of Saika teach that only the clock pulse signal CLK is used for selecting the image resolution value. Even if the Office Action were to interpret the start signal SIN as the claimed resolution setting signal(s), Saika would still (at best) only teach the alleged resolution setting signal(s) being inputted through two input terminals (i.e., one input terminal for the clock pulse signal CLK, and one input terminal for the start signal SIN). Therefore, Saika would still fail to teach the claimed resolution setting signals being inputted through a first input terminal, a second input terminal and a resolution setting

portion, as recited in independent claim 1; or first, second and third input terminals, as recited in independent claim 30.

Further, Saika does not teach or render obvious "one of a plurality of on-off control patterns of said plurality of channel selector switches [being selected] on the basis of on-off states of the first and second resolution setting signals upon at least one of rising and falling of said resolution setting timing signal," as recited in independent claim 1; and "selecting one of a plurality of on-off control patterns of said plurality of channel selector switches, on the basis of on-off states of the first and second resolution setting signals upon at least one of rising and falling of said resolution setting timing signal," as recited in independent claim 30 (emphasis added).

As discussed above, the Office Action asserts that the clock pulse signal CLK of Saika corresponds to the claimed resolution setting timing signal of independent claims 1 and 30, and that the two portions T1, T2 of the clock pulse signal CLK of Saika correspond to the claimed first and second resolution setting signals of independent claims 1 and 30 (see Office Action, page 4). However, the drive circuit of Saika outputs the first and second pulse widths T1, T2 based on whether a first or second resolution is selected (see Abstract of Saika). The on-off states of the clock pulse signal CLK and pulse widths thereof T1, T2 are irrelevant in the selection of the resolution setting (see paragraph [0005] of Saika, relating the device of Saika to a prior art reference that changes resolution according to a user). Therefore, Saika does not teach changing resolution on the basis of on-off states of the first and second resolution setting signals upon at least one of rising and falling of said resolution setting timing signal, as recited in independent claims 1 and 30.

Abe, Kozuka and Moss do not remedy the above-described deficiencies of Saika.

Therefore, for at least these reasons, independent claims 1 and 30 are patentable over the above-applied references. Claims 2-28, 32 and 33, which variously depend from

independent claims 1 and 30, are also patentable for at least their dependency on independent claims 1 and 30, as well as for the additional features they recite. Applicants thus respectfully request withdrawal of the rejections.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

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Date: December 12, 2008

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